**WHAT IS CLAIMED IS:**

1. A resonance suppression circuit comprising:

a band-pass filter portion to pass signals associated with a resonance frequency, the band-pass filter portion including an operational amplifier;

a comparator portion, coupled to the band-pass filter portion, to sense voltage fluctuation at approximately the resonant frequency; and

a current dissipation portion to change a frequency of current based on the signals passing through the band-pass filter portion.

2. The resonance suppression circuit of claim 1, further comprising an amplification portion coupled between the comparator portion and the current dissipation portion, the amplification portion to receive a trigger signal from the comparator portion and to delay turning ON the current dissipation portion.

3. The resonance suppression circuit of claim 2, wherein the comparator portion and the amplification portion operate such that the current dissipation portion is OFF when there is substantially no noise on a power grid.

4. The resonance suppression circuit of claim 1, wherein the current dissipation portion comprises a MOS transistor.

5. The resonance suppression circuit of claim 1, wherein the band-pass filter portion is tolerant to process variations.

6. The resonance suppression circuit of claim 1, wherein the band-pass filter portion comprises a resistor and a capacitor coupled in parallel with the operational amplifier such that the resistor and the capacitor are coupled to both an input of the operational amplifier and to an output of the operational amplifier.

7. The resonance suppression circuit of claim 1, wherein the band-pass filter portion comprises a resistor and a capacitor coupled in series to an input of the operational amplifier.

8. The resonance suppression circuit of claim 1, wherein a filter gain of the band-pass filter portion is based on a ratio of impedance of a first resistor and a first capacitor and an impedance of a second resistor and a second capacitor.

9. The resonance suppression circuit of claim 7, wherein the first resistor and the first capacitor are coupled to both an input and an output of the operational amplifier, and the second capacitor and the second resistor are coupled in series to the input of the operational amplifier.

10. The resonance suppression circuit of claim 1, wherein the band-pass filter is provided without matching requirements of capacitors and resistors.

11. A chip comprising:

a power grid to distribute a voltage; and

a resonance suppression circuit to suppress resonance on the power grid, the resonance suppression circuit comprising:

a band-pass filter portion having an operational amplifier coupled between two signal lines of the power grid; and

a current dissipation portion to change a frequency of current on the power grid based on the signals passing through the band-pass filter portion.

12. The chip of claim 11, further comprising a comparator portion, coupled to the band-pass filter portion, to receive the signals passing through the band-pass filter portion, the comparator portion to sense voltage fluctuation at approximately a resonant frequency.

13. The chip of claim 12, further comprising an amplification portion coupled between the comparator portion and the current dissipation portion, the

amplification portion to receive a trigger signal from the comparator portion and to delay a turning ON of the current dissipation portion.

14. The chip of claim 13, wherein the comparator portion and the amplification portion operate such that the current dissipation portion is OFF when there is substantially no noise on a power grid.

15. The chip of claim 11, wherein the current dissipation portion comprises a MOS transistor.

16. The chip of claim 11, wherein the band-pass filter portion comprises a resistor and a capacitor coupled in parallel with the operational amplifier such that the resistor and the capacitor are coupled to both an input of the operational amplifier and an output of the operational amplifier.

17. The chip of claim 11, wherein the band-pass filter portion comprises a resistor and a capacitor coupled in series to an input of the operational amplifier.

18. The chip of claim 11, wherein the band-pass filter is provided without matching requirements of capacitors and resistors.

19. The chip of claim 11, wherein a filter gain of the band-pass filter portion is based on a ratio of impedance of a first resistor and a first capacitor and an impedance of a second resistor and a second capacitor.

20. The chip of claim 19, wherein the first resistor and the first capacitor are coupled to both an input and an output of the operational amplifier, and the second capacitor and the second resistor are coupled in series to the input of the operational amplifier.

21. The chip of claim 11, wherein the band-pass filter portion is tolerant to process variations.

22. A system comprising:

a power supply to supply power; and

a chip coupled to the power supply to receive the power, the chip comprising:

a power grid to distribute a voltage based on the received power; and

a resonance suppression circuit including

a band-pass filter portion having an inverter coupled between two signal lines of the power grid, the band-pass filter portion including

a first capacitor and a first resistor both coupled to an input and to an output of the inverter; and

a current dissipation portion to change a frequency of current on the power grid based on signals passing through the band-pass filter portion.

23. The system of claim 22, further comprising a comparator portion, coupled to the band-pass filter portion, to receive the signals passing through the band-pass filter portion, the comparator portion to sense voltage fluctuation at approximately a resonant frequency.

24. The system of claim 22, wherein the band-pass filter portion comprises a second resistor and a second capacitor coupled in series with an input of the inverter.